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Richard E. Stanley, Jr.  
Brinks Hofer Gilson & Lione  
P.O. Box 10395  
Chicago, IL 60610

EXAMINER

BAYARD, DJENANE M

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/867,730

Applicant(s)

SONG, YU

Examiner

Djenane M Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/26/02</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,119,171 to Alkhatib.

- a. As per claim 1, Alkhatib teaches a communication protocol comprising segmenting digital data into segments in a first application layer (See col. 5, lines 36-40); packetizing said segments in a first internet protocol layer (See col. 5, lines 40-43); reassembling said packets in a second internet protocol layer (See col. 5, lines 44-46); and reassembling said segments in a second application layer (See col. 5, lines 46-48).

- b. As per claim 9, Alkhatib teaches wherein said internet protocol layer is a user datagram protocol (See col. 9, lines 30-35).

3. Claims 17-19, 26-27, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,774,660 to Brendel et al.

a. As per claim 17, Brendel et al teaches a server cluster comprising a first tier and a second tier; said first tier comprising at least one server and said second tier comprising at least one server; said first tier managing said second tier; wherein said first tier receives a request for a communication link and sends said request to said second tier, said second tier thereby responding to said request (See col. 9, lines 26-50 and figure 6b).

b. As per claim 18, Brendel et al teaches wherein said second tier comprises at least two servers (See col. 9, lines 26-50 and See figure 6b).

c. As per claim 19, Brendel et al teaches wherein each second tier server responds to said request and said communication link is established with the first second tier server to respond (See col. 11, lines 64-67 and col. 12, lines 1-5).

d. As per claim 26, Brendel et al teaches wherein said first tier communicates with said second tier using an internet protocol, said first tier and said second tier being separate server networks (See col. 6, lines 20-26 and col. 10, lines 8-18).

e. As per claim 27, Brendel et al teaches wherein said at least two servers of said second tier are separate server networks (See col. 8, lines 36-42 and figure 5).

f. As per claim 30, Brendel et al teaches wherein each second tier server responds to said request and said communication link is established with the first second tier server to

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respond; wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers; wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers; wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks; and wherein said first tier communicates with said second tier using an internet protocol, said first tier and said second tier being separate server networks (See col. 9, lines 26-50 and figure 6b and col. 6, lines 20-26 and col. 10, lines 8-18).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,119,171 to Alkhatib in view of U.S. Patent No. 6,769,030 to Bournas.

a. As per claim 2, Alkhatib teaches the claimed invention as described above.

However, Alkhatib fails to teach testing said packets for errors; and changing a size of said segments in response to said packet testing.

Bournas teaches a method and apparatus to evaluate and measure the optimal network packet size for life transfer in high speed networks. Furthermore, Bournas teaches testing said packets for errors; and changing a size of said segments in response to said packet testing (See col. 4, lines 40-67).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate testing said packets for errors; and changing a size of said segments in response to said packet testing as taught by Bournas in the claimed invention of Alkhatib in order to maximize a transfer of data to a target (See col. 1, lines 46 – 48).

b. As per claim 3, Alkhatib teaches the claimed invention as described above. However, Alkhatib fails to teach wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if said packet testing detects a packet error in said digital data.

Bournas teaches wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if said packet testing detects a packet error in said digital data (See col. 4, 50-60)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if said packet testing detects a packet error in said digital data as taught by Bournas in the claimed invention of Alkhatib in order to maximize transfer of data to a target (See col. 1, lines 46-48).

c. As per claim 4, Alkhatib teaches the claimed invention as described above.

However, Alkhatib fails to teach wherein said segment size is changed between a low limit and a high limit.

Bournas teaches wherein said segment size is changed between a low limit and a high limit (See col. 4, lines 65-67)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein said segment size is changed between a low limit and a high limit as taught by Bournas in the claimed invention of Alkhatib in order to maximize transfer of data to a target (See col. 1, lines 46-48).

d. As per claim 5, Alkhatib teaches the claimed invention as described above.

However, Alkhatib fails to teach wherein said segment size is not changed if said packet testing detects no packet errors in said digital data and said segment size is at said high limit; said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is not at said high limit; said segment size is not changed if said packet testing detects a packet error in said digital data and said segment size is at said low limit; and said segment size is decreased if said packet testing detects a packet error in said digital data and said segment size is not at said low limit.

Bournas teaches wherein said segment size is not changed if said packet testing detects no packet errors in said digital data and said segment size is at said high limit; said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is not at said high limit; said segment size is not changed if

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said packet testing detects a packet error in said digital data and said segment size is at said low limit; and said segment size is decreased if said packet testing detects a packet error in said digital data and said segment size is not at said low limit (See col. 4, lines 40-67):

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein said segment size is not changed if said packet testing detects no packet errors in said digital data and said segment size is at said high limit; said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is not at said high limit; said segment size is not changed if said packet testing detects a packet error in said digital data and said segment size is at said low limit; and said segment size is decreased if said packet testing detects a packet error in said digital data and said segment size is not at said low limit as taught by Bournas et al in the claimed invention of Alkhatib in order to maximize transfer of data to a target (See col. 1, lines 46-48)

e. As per claim 6, Alkhatib teaches the claimed invention as described above.

Furthermore, Alkhatib fails to teach in combination with transmitting and receiving said packets over a wireless link between said packetizing and said packet reassembling (See col. 5, lines 36-67). However, Alkhatib fails to teach wherein the link is wireless.

Bournas teaches wherein the link is wireless (See col. 8, lines 24-40).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the link is wireless in the claimed invention of Alkhatib as taught by Bournas in order to send data from the source to the target in a



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manner that optimizes network productivity (See col. 1, lines 18-20).

6. Claims 7-8 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,119,171 to Alkhatib in view of U.S. Patent No. 6,141,784 to Davis et al.

a. As per claim 7, Alkhatib teaches the claimed invention as described above. However, Alkhatib fails to teach testing said packets for errors; and retransmitting only said segments having packet errors without retransmitting said segments having no packet errors.

Davis et al teaches a method and system in a data communication system for the retransmission of only an incorrectly transmitted portion of a data packet. Furthermore, Davis et al teaches testing said packets for errors; and retransmitting only said segments having packet errors without retransmitting said segments having no packet errors (See col. 4, lines 55-61).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate testing said packets for errors; and retransmitting only said segments having packet errors without retransmitting said segments having no packet errors as taught by Davis et al in the claimed invention of Alkhatib in order to improve data processing (See col. 2, lines 9-10).

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b. As per claim 8, Alkhatib teaches the claimed invention as described above.

However, Alkhatib fails to teach testing said packets for errors; and retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer.

Davis et al teaches testing said packets for errors; and retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer (See col. 4).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate testing said packets for errors; and retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer as taught by Davis et al in the claimed invention of Alkhatib in order to improve data processing (See col. 2, lines 9-10).

c. As per claim 11, Alkhatib teaches the claimed invention as described above.

Furthermore, Alkhatib fails to teach testing said packets for errors; changing a size of said segments in response to said packet testing (See col. 5); However, Alkhatib fails to teach retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer.

Davis et al teaches retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer (See col. 4, lines 48-61)

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It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer as taught by Davis et al in the claimed invention of Alkhatib in order to improve data processing (See col. 2, lines 9-10).

d. As per claim 12, Alkhatib teaches wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if said packet testing detects a packet error in said digital data; wherein said segment size is changed between a low limit and a high limit (See col. 5, lines 20-67); However, Alkhatib fails to teach wherein only said segments having packet errors are retransmitted and said segments having no packet errors are not retransmitted.

Davis et al teaches wherein only said segments having packet errors are retransmitted and said segments having no packet errors are not retransmitted (See col. 4, lines 48-61).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein only said segments having packet errors are retransmitted and said segments having no packet errors are not retransmitted as taught by Davis et al in the claimed invention of Alkhatib in order to improve data processing (See col. 2, lines 9-10).

7. Claim 13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable

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over U.S. Patent No. 6,119,171 to Alkhatib in view of U.S. Patent No. 6,141,784 to Davis et al. as applied to claim 12 above, and further in view of U.S. Patent No. 6,769,030 to Bournas.

a. As per claim 13, Alkhatib teaches the claimed invention as described above. Furthermore, Alkhatib teaches in combination with transmitting and receiving said packets over a wireless link between said packetizing and said packet reassembling (See col. 5, lines 30-65); and wherein said internet protocol layer is a user datagram protocol (See col. 9, lines 30-36). However, Alkhatib fails to teach wherein the link is wireless.

Bournas teaches wherein the link is wireless (See col. 8, lines 24-40).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the link is wireless in the claimed invention of Alkhatib as taught by Bournas in order to send data from the source to the target in a manner that optimizes network productivity (See col. 1, lines 18-20).

b. As per claim 15, Alkhatib teaches the claimed invention as described above. Furthermore, Alkhatib teaches comprising testing said packets for errors; further comprising changing a size of said segments in response to said packet testing; and in combination with transmitting and receiving said packets over a link between said packetizing and said packet reassembling (See col. 5, lines 30-65).

However, Alkhatib fails to teach wherein the link is wireless.

Bournas teaches wherein the link is wireless (See col. 8, lines 24-40).

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It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the link is wireless in the claimed invention of Alkhatib as taught by Bournas in order to send data from the source to the target in a manner that optimizes network productivity (See col. 1, lines 18-20).

c. As per claim 16, Alkhatib teaches the claimed invention as described above. Furthermore, Alkhatib teaches wherein said internet protocol layer is a user datagram protocol (See col. 9, lines 30-36).

8. Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,119,171 to Alkhatib in view of U.S. Patent No. 6,141,784 to Davis et al. as applied to claim 12 above, and further in view of U.S. Patent No. 6,769,030 to Bournas as applied to claim 13 above, and further in view of U.S. Patent No. 2003/0054810 to Chen et al.

a. As per claims 10 and 14, Alkhatib teaches the claimed invention as described above. However, Alkhatib fails to teach generating said digital data in a live mobile camera system, said digital data being a digitized picture of the visual surroundings around a mobile client.

Chen et al teaches generating said digital data in a live mobile camera system, said digital data being a digitized picture of the visual surroundings around a mobile client (see page 11, paragraph [0151]).

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It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate generating said digital data in a live mobile camera system, said digital data being a digitized picture of the visual surroundings around a mobile client as taught by Chen et al in the claimed invention of Alkhatib et al in order to allow mobile device to communicate with each other and to access corporate contents and services (See abstract, lines 3-5)

9. Claims 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,774,660 to Brendel et al in view of U.S. Patent No. 6,718,359 to Zisapel et al.

a. As per claim 20, Brendel et al teaches the claimed invention as described above. However, Brendel et al fails to teach wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers.

Zisapel et al teaches a method for load balancing requests on the network. Furthermore, Zisapel teaches wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers (See col. 6, lines 16-40)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers as taught

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by Zisapel et al in the claimed invention of Brendel et al in order to prevent a server from becoming overloaded with requests from clients 9See col. 1, lines 13-15).

b. As per claim 21, Brendel et al teaches the claimed invention as described above. However, Brendel et al fails to teach wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers.

Zisapel et al teaches wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers (See col. 5, lines 10-25).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers as taught by Zisapel et al in the claimed invention of Brendel et al in order to prevent a server from becoming overloaded with requests from clients 9See col. 1, lines 13-15).

c. As per claim 22, Brendel et al teaches the claimed invention as described above. However, Brendel et al fails to teach wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message.

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Zisapel et al teaches wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message (See col. 5 and 6).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message as taught by Zisapel et al in the claimed invention of Brendel et al in order to prevent a server from becoming overloaded with requests from clients (See col. 1, lines 13-15).

d. As per claim 23, Brendel et al teaches the claimed invention as described above. However, Brendel et al fails to teach wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks.

Zisapel et al teaches wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks (See col. 5 and col. 6).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein at least two of said first tier servers



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communicate with each other using an internet protocol, said at least two first tier servers being separate server networks as taught by Zisapel et al in order to prevent a server from becoming overloaded with requests from clients (See col. 1, lines 13-15).

e. As per claim 24, Brendel et al teaches the claimed invention as described above. Furthermore, Brendel et al teaches wherein a requester sending said request for said communication link, said requester storing an identity of one of said first tier servers as a default server to send said request to (See col. 7, lines 14-28).

f. As per claim 25, Brendel et al teaches the claimed invention as described above. Furthermore, Brendel et al teaches The server cluster according to claim 24, wherein said requester updates stored identities of said first tier servers, said requester selecting one of said first tier servers to send said request to.

10. Claims 28-29, 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,774,660 to Brendel et al. in view of U.S. Patent Application No. 2003/0054810 to Chen et al.

a. As per claim 28, Brendel et al teaches the claimed invention as described above. However, Brendel et al fails to teach with a wireless link, said wireless link being coupled to said requested communication link.

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Chen et al teaches an enterprise mobile server platform. Furthermore, Chen et al teaches with a wireless link, said wireless link being coupled to said requested communication link (See paragraph [0008-0010]).

It would have obvious to one with ordinary skill in the art at the time the invention was made to incorporate with a wireless link, said wireless link being coupled to said requested communication link as taught by Chen et al in the claimed invention of Brendel et al in order to allow mobile device to communicate with each other and to access corporate contents and services (See abstract, lines 3-5)

b. As per claim 29, Brendel et al teaches the claimed invention as described above. However, Brendel et al fails to teach in combination with a live mobile camera system comprising a mobile client with a camera, whereby said camera takes pictures of visual surroundings around said mobile client, said pictures being sent through said communication link.

Chen et al teaches in combination with a live mobile camera system comprising a mobile client with a camera, whereby said camera takes pictures of visual surroundings around said mobile client, said pictures being sent through said communication link (see page 11, paragraph [0151]).

It would have obvious to one with ordinary skill in the art at the time the invention was made to incorporate in combination with a live mobile camera system comprising a mobile client with a camera, whereby said camera takes pictures of visual surroundings around said mobile client, said pictures being sent through said communication link as taught by Chen et al in the claimed invention of Brendel et al in

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order to allow mobile device to communicate with each other and to access corporate contents and services (See abstract, lines 3-5)

c. As per claim 31, Brendel et al teaches wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message; in combination with a requester sending said request for said communication link, said requestor storing an identity of one of said first tier servers as a default server to send said request to; wherein said requestor updates stored identities of said first tier servers, said requestor selecting one of said first tier servers to send said request to; However, Brendel et al fails to teach in combination with a wireless link, said wireless link being coupled to said requested communication link; and in combination with a live mobile camera system comprising a mobile client with a camera, whereby said camera takes pictures of visual surroundings around said mobile client, said pictures being sent through said communication link.

Chen et al teaches in combination with a wireless link, said wireless link being coupled to said requested communication link; and in combination with a live mobile camera system comprising a mobile client with a camera, whereby said camera takes pictures of visual surroundings around said mobile client, said pictures being sent through said communication link (See col. 6, lines 20-26 and col. 10, lines 8-18).

It would have obvious to one with ordinary skill in the art at the time the invention was made to incorporate in combination with a wireless link, said wireless link

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being coupled to said requested communication link; and in combination with a live mobile camera system comprising a mobile client with a camera, whereby said camera takes pictures of visual surroundings around said mobile client, said pictures being sent through said communication link as taught by Chen et al in the claimed invention of Brendel et al in order to allow mobile device to communicate with each other and to access corporate contents and services (See abstract, lines 3-5)

d. As per claim 32, Brendel et al teaches wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers; in combination with a requestor sending said request for said communication link, said requester storing an identity of one of said first tier servers as a default server to send said request to; wherein said requestor updates stored identities of said first tier servers, said requester thereby selecting one of said first tier servers to send said request to (See col. 9, lines 26-50 and figure 6b and col. 6, lines 20-26 and col. 10, lines 8-18); However, Brendel et al fails to teach in combination with a wireless link, said wireless link being coupled to said requested communication link; and in combination with a live mobile camera system comprising a mobile client with a camera, whereby said camera takes pictures of visual surroundings around the mobile client, said pictures being sent through said communication link.

Chen et al teaches in combination with a wireless link, said wireless link being coupled to said requested communication link; and in combination with a live mobile camera system comprising a mobile client with a camera, whereby said camera takes pictures of visual surroundings around said mobile client, said pictures being sent through

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said communication link (See col. 6, lines 20-26 and col. 10, lines 8-18).

It would have obvious to one with ordinary skill in the art at the time the invention was made to incorporate in combination with a wireless link, said wireless link being coupled to said requested communication link; and in combination with a live mobile camera system comprising a mobile client with a camera, whereby said camera takes pictures of visual surroundings around said mobile client, said pictures being sent through said communication link as taught by Chen et al in the claimed invention of Brendel et al in order to allow mobile device to communicate with each other and to access corporate contents and services (See abstract, lines 3-5)

e. As per claim 33, Brendel et al teaches wherein one of said first tier servers reassigns one of said second tier servers managed by said o reassigning first tier server to another of said first tier servers; wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message; wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks; in combination with a requestor sending said request for said communication link, said requestor storing an identity of one of said first tier servers as a default server to send said request to; wherein said requestor updates stored identities of said first tier servers, said requestor selecting one of said first tier servers to send said request to; wherein said first tier communicates with said second tier using an internet protocol, said

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first tier and said second tier being separate server networks (See col. 9, lines 26-50 and figure 6b and col. 6, lines 20-26 and col. 10, lines 8-18).

11. Claims 34, 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application No. 2003/0054810 to Chen et al in view of U.S. Patent No. 6,119,171 to Alkhatib and further in view of U.S. Patent No. 5,774,660 to Brendel et al.

a. As per claim 34, Chen et al teaches a live mobile camera system comprising a mobile client with a camera generating realtime pictures of visual surroundings around said mobile client; a wireless link transmitting said pictures, wherein said pictures are transmitted over said wireless link according to a communication protocol (See page 11, paragraph [0151]. However, Chen et al fails to teach comprising segmenting digital data into segments in a first application layer, packetizing said segments in a first internet protocol layer, reassembling said packets in a second internet protocol layer, and reassembling said segments in a second application layer; and a server cluster receiving said wireless link, wherein said server cluster comprises a first tier and a second tier, said first tier comprising at least one server and said second tier comprising at least two servers, said first tier managing said second tier, wherein said first tier receives a request for a communication link and sends said request to said second tier, said second tier thereby responding to said request.

Alkhatib teaches a domain names to route data sent to a destination on a network. Furthermore, Alkhatib teaches segmenting digital data into segments in a first application

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layer, packetizing said segments in a first internet protocol layer, reassembling said packets in a second internet protocol layer, and reassembling said segments in a second application layer (See col. 5, lines 36-48).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate segmenting digital data into segments in a first application layer, packetizing said segments in a first internet protocol layer, reassembling said packets in a second internet protocol layer, and reassembling said segments in a second application layer as taught by Alkhatib in the claimed invention of Chen et al in order to route data sent to a destination on a network (See col. 2, lines 65-67 and col. 3, lines 1-2).

Brendel et al teaches a server cluster receiving said wireless link, wherein said server cluster comprises a first tier and a second tier, said first tier comprising at least one server and said second tier comprising at least two servers, said first tier managing said second tier, wherein said first tier receives a request for a communication link and sends said request to said second tier, said second tier thereby responding to said request (See col. 9, lines 26-50 and figure 6b).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate a server cluster receiving said wireless link, wherein said server cluster comprises a first tier and a second tier, said first tier comprising at least one server and said second tier comprising at least two servers, said first tier managing said second tier, wherein said first tier receives a request for a communication link and sends said request to said second tier, said second tier thereby responding to said

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request as taught by Brendel et al in the claimed invention of Chen in view of Alkhatib in order to determine which server can service the request (See col. 10, lines 35-55).

b. As per claim 37, Chen et al teaches the claimed invention as described above. However, Chen et al fails to teach wherein each second tier server responds to said request and said communication link is established with the first second tier server to respond, wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers, and wherein said mobile client stores an identity of one of said first tier servers as a default server to send said request to.

Brendel et al teaches wherein each second tier server responds to said request and said communication link is established with the first second tier server to respond, wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers, and wherein said mobile client stores an identity of one of said first tier servers as a default server to send said request to (See col. 9, lines 26-50 and figure 6b).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein each second tier server responds to said request and said communication link is established with the first second tier server to respond, wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers, and wherein said mobile client stores an identity of one of said first tier servers as a default server to send said request to as taught by Brendel et al in the claimed invention of Chen et al in order to in order to determine which server can service the request (See col. 10, lines 35-55).



c. As per claim 38, Chen et al teaches the claimed invention as described above. However, Chen et al fails to teach wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers, wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message, wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks, wherein said mobile client updates stored identities of said first tier servers, said mobile client selecting one of said first tier servers to send said request to, and wherein said first tier communicates with said second tier using an internet protocol, said first tier and said second tier being separate server networks.

Brendel et al teaches wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers, wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message, wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks, wherein said mobile client updates stored identities of said first tier servers, said mobile client

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selecting one of said first tier servers to send said request to, and wherein said first tier communicates with said second tier using an internet protocol, said first tier and said second tier being separate server networks (See col. 9, lines 26-50 and figure 6b).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers, wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message, wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks, wherein said mobile client updates stored identities of said first tier servers, said mobile client selecting one of said first tier servers to send said request to, and wherein said first tier communicates with said second tier using an internet protocol, said first tier and said second tier being separate server networks as taught by Brendel et al in the claimed invention of Chen et al in order to in order to determine which server can service the request (See col. 10, lines 35-55).

d. As per claim 39, Chen et al teaches the claimed invention as described above. However, Chen et al fails to teach wherein said communication protocol further comprises testing said packets for errors, and changing a size of said segments in response to said packet testing, and wherein said internet protocol layer is a user

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datagram protocol, wherein each second tier server responds to said request and said communication link is established with the first second tier server to respond, wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers, and wherein said mobile client stores an identity of one of said first tier servers as a default server to send said request to.

Brendel et al teaches wherein said communication protocol further comprises testing said packets for errors, and changing a size of said segments in response to said packet testing, and wherein said internet protocol layer is a user datagram protocol, wherein each second tier server responds to said request and said communication link is established with the first second tier server to respond, wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers, and wherein said mobile client stores an identity of one of said first tier servers as a default server to send said request to (See col. 9, lines 26-50 and figure 6b).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein said communication protocol further comprises testing said packets for errors, and changing a size of said segments in response to said packet testing, and wherein said internet protocol layer is a user datagram protocol, wherein each second tier server responds to said request and said communication link is established with the first second tier server to respond, wherein said first tier comprises at least two servers whereby each of said first tier servers manages at least two second tier servers, and wherein said mobile client stores an identity of one of said first tier servers as a default server to send said request to as taught by

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Brendel et al in the claimed invention of Chen et al in order to in order to determine which server can service the request (See col. 10, lines 35-55).

12. Claims 35- 36 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application No. 2003/0054810 to Chen et al in view of U.S. Patent No. 6,119,171 to Alkhatib and further in view of U.S. Patent No. 5,774,660 to Brendel et al as applied to claim 34 above, and further in view of U.S. Patent No. 6,769,030 to Bournas.

a. As per claim 35, Chen et al teaches the claimed invention as described above. However, Chen et al fails to teach wherein said communication protocol further comprises testing said packets for errors, and changing a size of said segments in response to said packet testing, and wherein said internet protocol layer is a user datagram protocol.

Bournas et al teaches wherein said communication protocol further comprises testing said packets for errors, and changing a size of said segments in response to said packet testing, and wherein said internet protocol layer is a user datagram protocol (See col. 4, lines 40-67).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein said communication protocol further comprises testing said packets for errors, and changing a size of said segments in response to said packet testing, and wherein said internet protocol layer is a user datagram protocol as taught by Bournas in the claimed invention of Chen et al in view of

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Alkhatib and further in view of Brendel et al in order to maximize a transfer of data to a target (See col. 1, lines 46 – 48).

b. As per claim 36, Chen et al teaches the claimed invention as described above. However, Chen et al fails to teach wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if said packet testing detects a packet error in said digital data, wherein said segment size is changed between a low limit and a high limit, and wherein said communication protocol further comprises retransmitting only said segments having packet errors without retransmitting said segments having no packet errors, and retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer.

Bournas et al teaches wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if said packet testing detects a packet error in said digital data, wherein said segment size is changed between a low limit and a high limit, and wherein said communication protocol further comprises retransmitting only said segments having packet errors without retransmitting said segments having no packet errors, and retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer (See col. 4, lines 30-67).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if

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said packet testing detects a packet error in said digital data, wherein said segment size is changed between a low limit and a high limit, and wherein said communication protocol further comprises retransmitting only said segments having packet errors without retransmitting said segments having no packet errors, and retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer as taught by Bournas in the claimed invention of Chen et al in view of Alkhatib and further in view of Brendel et al in order to maximize a transfer of data to a target (See col. 1, lines 46 – 48).

c. As per claim 40, Chen et al teaches the claimed invention as described above. However, Chen et al fails to teach wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if said packet testing detects a packet error in said digital data, wherein said segment size is changed between a low limit and a high limit, and wherein said communication protocol further comprises retransmitting only said segments having packet errors without retransmitting said segments having no packet errors, and retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer, wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers, wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said

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requesting message, wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks, wherein said mobile client updates stored identities of said first tier servers, said mobile client selecting one of said first tier servers to send said request to, and wherein said first tier communicates with said second tier using an internet protocol, said first tier and said second tier being separate server networks.

Bournas teaches wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if said packet testing detects a packet error in said digital data, wherein said segment size is changed between a low limit and a high limit, and wherein said communication protocol further comprises retransmitting only said segments having packet errors without retransmitting said segments having no packet errors, and retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer(See col. 4, lines 30-67).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein said segment size is increased if said packet testing detects no packet errors in said digital data and said segment size is decreased if said packet testing detects a packet error in said digital data, wherein said segment size is changed between a low limit and a high limit, and wherein said communication protocol further comprises retransmitting only said segments having packet errors without retransmitting said segments having no packet errors, and retransmitting at least one of said segments in response to said packet testing from said first application layer without retransmitting from said first internet protocol layer as taught by Bournas in the claimed

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invention of Chen et al in view of Alkhatib and further in view of Brendel et al in order to maximize a transfer of data to a target (See col. 1, lines 46 – 48).

Brendel et al teaches wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers, wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message, wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks, wherein said mobile client updates stored identities of said first tier servers, said mobile client selecting one of said first tier servers to send said request to, and wherein said first tier communicates with said second tier using an internet protocol, said first tier and said second tier being separate server networks (See col. 9, lines 20-65).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein one of said first tier servers reassigns one of said second tier servers managed by said reassigning first tier server to another of said first tier servers, wherein said reassignment comprises said reassigning first tier server sending a message requesting acceptance of said one of said second tier servers to said another of said first tier servers, said another of said first tier servers establishing management of said one of said second tier servers upon acceptance of said requesting message, wherein at least two of said first tier servers communicate with each other using an internet protocol, said at least two first tier servers being separate server networks,



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wherein said mobile client updates stored identities of said first tier servers, said mobile client selecting one of said first tier servers to send said request to, and wherein said first tier communicates with said second tier using an internet protocol, said first tier and said second tier being separate server networks as taught by Brendel et al in the claimed invention of Chen et al in order to in order to determine which server can service the request (See col. 10, lines 35-55).

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,523,036 to Hickman et al teaches load balancing read and write transactions across multiple servers.

U.S. Patent No. 6,487,393 to Davenport et al teaches a method for data exchange with a mobile asset considering communication link quality,


U.S. Patent No. 6,480,899 to Seddigh et al teaches a differentiated service IP quality of service round trip time aware intelligent traffic conditioner in an ingress node of Any inquiry concerning this communication or earlier communications from the virtual private networks.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Djenane M Bayard whose telephone number is (703) 305-6606. As of October 26, 2004, the examiner telephone number will be (571) 272-3878. The examiner can normally be reached on 7:00 AM-4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**RUPAL DHARIA**  
SUPERVISORY PATENT EXAMINER